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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,965	07/10/2006	Baoning Zong	13598/I	4197
26646 7590 01/16/2009 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				
EXAMINER				
WOOD, ELIZABETH D				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
01/16/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/562,965

**Applicant(s)**

ZONG ET AL.

**Examiner**

Elizabeth D. Wood

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2008 and 03 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 39-51, 65 and 67-77 is/are pending in the application.
- 4a) Of the above claim(s) 65 and 67-77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Specification***

The examiner has not checked the specification to the extent necessary to determine the presence of **all** possible minor errors (grammatical, typographical and idiomatic). Cooperation of the applicant(s) is requested in correcting any errors of which applicant(s) may become aware of in the specification, in the claims and in any future amendment(s) that applicant(s) may file.

Applicant(s) is also requested to complete the status of any copending applications referred to in the specification by their Attorney Docket Number or Application Serial Number, **if any**.

The status of the parent application(s) and/or any other application(s) cross-referenced to this application, **if any**, should be updated in a timely manner.

***Election/Restriction***

Applicant's arguments filed July 3, 2008 with respect to the restriction state that "the office has yet to issue a restriction, but has asserted an election. Applicants find the Office's tactic confusing and misleading". This is not convincing, nor is it correct. The claims presented in the original application (65 and 66) were properly rejected as non statutory use claims in the first office action mailed September 27, 2007. **Use claims are non-statutory and not treated on the merits as indicated in the office action.** The applicant was apprised at that time that proper examination procedure to insure compact prosecution might well result in those claims being withdrawn from consideration as being directed to a non-elected invention **since applicant has already**

**had an action on the merits for an independent and distinct invention.** In the office action mailed March 28, 2008, the examiner specifically indicated the amended claims to be directed to an independent and distinct invention, and presented the reasons for the restriction thereof (pages 2-3), concluding that applicant has already had an action on the merits for the invention effectively elected by original presentation. This is neither confusing nor misleading, and is in fact provided for in CFR 1.142(b).

Accordingly, claims 65 and 67-77 remain withdrawn from consideration. The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39-51 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amendments to some of the dependent claims remove some of the inconsistencies present in the instant claims, but do not correct the overall issues that are causing confusion. Claim 39 still lacks specific antecedent basis for the recitation of "the sieve" because "sieves" is listed earlier in the claim, thus making it unclear whether one or all of the sieves must contain vanadium in the skeleton. In other words, the independent claim refers to molecular sieves in the PLURAL, then recites that "the sieve" has further limitations. Claim 39 should recite "A composition for desulfurization comprising one or more molecular sieves, a supporter, and a zeolite, wherein said

molecular sieves have a molecular sieve skeleton and vanadium is incorporated into the molecular sieve skeleton" to provide proper antecedent basis for the limitation. This will also provide consistency in the dependent claims as they are currently recited and would obviate the rejection of record.

Applicant's arguments with respect to this rejection are not convincing. The arguments refer to "off-hand remarks", the Office's misunderstanding of the invention, and whether the rejection presented is "merely commentary". This fails to address the simple fact that claim 39 is internally inconsistent. The rejection presented by the examiner indicated this to be the problem. The claim must be read in light of the specification, but must also be internally consistent as well as commensurate with the disclosure of the invention, which indicates that the **entire** "molecular sieves component" is made up of one with vanadium in the skeleton, but the presented claims do not recite this limitation with specificity. The specific language suggested above will remove the rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 39-51 remain rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,814,316 for the reasons set forth in the previous office action.

Applicant's arguments with respect to this rejection indicate that Pellet et al. do not teach catalyst components with vanadium in the skeleton. This is not convincing. The materials specified in the reference, for example MeAPSO or ELAPO, are indistinguishable from the molecular sieves employed by applicant. Pellet indicates by the very nomenclature that any incorporated metal will be in the framework rather than simply impregnated on the composition. The metals (such as vanadium) are indicated in Table 1 to be part of the framework (as indicated by the acronym). They are known to have catalytic/adsorbent properties, and the combination thereof with zeolites and binders in an FCC catalyst is taught by Pellet et al. Any benefits obtained by applicant

such as the concomitant removal of sulfur would naturally flow from this reference disclosure. Furthermore, the instant claims are not commensurate with any showing set forth in the instant specification. Accordingly, the rejection stands.

**The rejection of the claims under 35 USC 103(a) over US 5,855,864 is withdrawn. The examiner considers that the reference does not supply adequate direction to the artisan to arrive at a catalyst combination including a support, a molecular sieve with vanadium in the framework, and an additional zeolite component.**

#### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth D. Wood whose telephone number is 571-272-1377. The examiner can normally be reached on M-F, 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth D. Wood/  
Primary Examiner, Art Unit 1793

/E. D. W./  
Primary Examiner, Art Unit 1793